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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,675	08/09/2006	Pedro Cosma	PF030110	1714

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EXAMINER

WILLIAMS, AARON

ART UNIT	PAPER NUMBER
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2889

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,675	Applicant(s) COSMA ET AL.	
	Examiner Aaron Williams	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/13/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "21" in figures 4A and 4B has been used to designate both colour filter and electron ray. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference item 32 in figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.

(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 6 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent 0 709 872 B2 by Maki et al., herein refer to as Maki.

Regarding claim 1 Maki discloses in figures 1, 2, 6 and 7, **a front face** (panel (2), figure 1 refer to paragraph [0021]) **on which a luminophore screen is arranged on its internal part** (phosphor screen (8), figure 1 refer to paragraph [0021]), **a rear part in the form of a funnel terminating** (funnel glass (1), figure 1 refer to paragraph [0021]) **in a cylindrical part in which an electron gun** (electron gun (6), figure 1 refer to

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paragraph [0021]) **extends in the direction of the longitudinal axis Z of the tube axis passing through the centre of the front face** (refer figure 1 and refer to paragraph [0021]), **a colour selection mask formed by stamping and presenting a peripheral flange folded in a direction noticeably parallel to the longitudinal axis** (shadow mask (3), figure 1 refer to paragraphs [0021] – [0023]) **a frame designed to hold the mask at a distance from the screen, the said frame of a noticeably rectangular form has at least one pair of parallel sides of a noticeably L-shaped cross-section with a lateral flank extending in a direction parallel to the longitudinal axis connected to a flange noticeably perpendicular to the said longitudinal axis** (frame (4), figure 2 paragraph [0024]) **wherein the said L-shaped cross-section sides are the short sides of the frame and in that the width of the flange of each short side is smaller in the middle of the side than at its extremities so that the inner edge of the flange defines a curve whose concavity is oriented toward the longitudinal axis of the tube** (flange face 43b, figure 7 refer to paragraphs [0032] – [0033]).

Further, it is noted that the phrase “**formed by stamping**” is a product by process claim limitation. Initially, with respect to claims a “**product by process**” claim is directed to the product per se, no matter how actually made, all of which make it clear that it is the patentability of the final product per se which must be determined in a “**product by process**” claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not.

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Regarding claim 2 Maki discloses in figures 1, 2, 6 and 7, **cathode ray tube according to claim 1 wherein the long sides of the frame comprise an L-shaped cross-section and in that the width of the flange of each long side is greater in the middle of the said side than at its extremities.** Refer to flange face (43a), figure 6 refer to paragraphs [0032] – [0033].

Regarding claim 6 Maki discloses in figures 1, 2 6 and 7, **cathode ray tube according to claim 1 wherein the connecting edge of the flange to the lateral flank defines a curve whose concavity is oriented toward the longitudinal axis of the tube.** Refer to flange face (43a), figure 6 refer to paragraphs [0032] – [0033].

Claim Rejections - 35 USC § 103

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent 0 709 872 B2 by Maki et al., herein refer to as Maki, and further in view of US PG publication 2003/0080666 by Gorog et al., herein refer to Gorog.

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Regarding claim 4 Maki discloses in figures 1, 2 6 and 7, **Cathode ray tube according to the claim 1**, but fails to teach **wherein the mask is made of steel**. Maki teaches a frame mask made of Iron. However Gorog has a composed the colour selection mask of steel or Invar for the purpose of having a higher co-efficient of thermal expansion than iron refer to paragraph [0018]. Therefore it would have been obvious at the time the invention was made, to compose Maki's colour selection mask of steel as in Gorog's invention. Both the Maki and Gorog are in the same field of endeavor (CRT Mask Frame Assembly) and are directed to the same problem sought to be solved (optimizing Mask Frame Assembly).

9. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent 0 709 872 B2 by Maki et al., herein refer to as Maki, and further in view of US PG publication 2004/0189179 by Karita et al., herein refer to Karita.

Regarding claim 5 Maki discloses in figures 1, 2 6 and 7, **Cathode ray tube according to claim 2**, but is silent on **wherein the weight of the frame is less than two times the weight of the mask**. Maki does not specifically discuss the weight of the colour selection mask or frame. However, it is a common technique in the prior art to reduce the weight of mask and frame refer to paragraph [0006]. Specifically to keep the rigidity of the frame mask assembly rigid it is best to masses close to each other. Therefore, it would have been obvious at the time the invention was made, to reduce the weight of the frame members. Both the Maki and Karita are in the same field of

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endeavor (CRT Mask Frame Assembly) and are directed to the same problem sought to be solved (optimizing Mask Frame Assembly).

10. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent 0 709 872 B2 by Maki et al., herein refer to as Maki, as applied to claims 1, 2, 6 above, and further in view of US PG Publication 2002/0036457 by Kim et al., herein refer to Kim.

Regarding claim 3 Maki discloses in figures 1, 2, 6 and 7, **Cathode ray tube according to claim 2**. However it does not disclose **wherein the inner edge the said flange defines a curve whose concavity is oriented outwards from the frame**. Kim teaches in figure 2 a cathode ray tube wherein the inner edge the said flange defines a curve whose concavity is oriented outwards from the frame. Refer to paragraph [0037] where the frame structure is described. Motivation to combine is to increase the structural integrity Maki device. Therefore, it would have been obvious at the time the invention was made, to combine Maki's frame with Kim's flange portion to increase the structural integrity of the device. Both the Maki and Kim are in the same field of endeavor (CRT Mask Frame Assembly) and are directed to the same problem sought to be solved (optimizing Mask Frame Assembly).

Regarding claim 7 Maki discloses and Kim teaches, **cathode ray tube according to claim 1**, Kim further teaches **wherein the frame/mask assembly is held inside the tube by a support means at the corners of the frame**. This is done to

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reinforce the frame to hold it place securely. Refer to figure 10 and paragraphs [0050] – [0052].

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US PG publication 2003/0230963 and US PG Publication 2004/0189179.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Williams whose telephone number is (571) 270-5279. The examiner can normally be reached on Monday thru Friday 7:00 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron Williams/
Examiner, Art Unit 2889

/Toan Ton/
Supervisory Patent Examiner
Art Unit 2889